

Paranthrene dominiki sp. n., a new clearwing moth species from the Cameron Highlands in West Malaysia (Lepidoptera: Sesiidae, Sesiinae)

Heinz FISCHER

Dipl.-Math. Heinz FISCHER, Rainerweg 25, D-83700 Rottach, Germany; heinz-schmetterling@freenet.de

Abstract: *Paranthrene dominiki* sp. n., a clearwing moth species from the Cameron Highlands in West Malaysia, is described as new for science (holotype ♂ in Zoologische Staatssammlungen, Munich). A diagnosis to distinguish the new taxon from related species of the genera *Nokona* MATSUMURA, 1931, *Scoliokona* KALLIES & ARITA, 1998 and congeners of *Paranthrene* HÜBNER, [1819] is given.

Key words: Paranthrenini, new species, taxonomy, tropical area.

Paranthrene dominiki sp. n., eine neue Glasflüglerart von den Cameron Highlands in Westmalaysia (Lepidoptera: Sesiidae, Sesiinae)

Zusammenfassung: Die neue Glasflüglerart *Paranthrene dominiki* sp. n. wird aus den Cameron Highlands in Westmalaysia beschrieben (Holotypus ♂ in Zoologische Staatssammlungen, München). Es wird eine abgrenzende Diagnose gegenüber den zum Teil sympatrisch vorkommenden Arten der Gattungen *Nokona* MATSUMURA, 1931 und *Scoliokona* KALLIES & ARITA, 1998 sowie weiterer nah verwandter Arten der Gattung *Paranthrene* HÜBNER, [1819] gegeben.

Introduction

Recent field studies on the Malayan Peninsula by Dominik STRÖHLE (Weiden/Opf., Germany) resulted besides other material in collecting a single specimen of a new clearwing moth of the genus *Paranthrene* HÜBNER, [1819]. This is described here:

Paranthrene dominiki sp. n.

Holotype: ♂, [West] Malaysia, Cameron Highlands, 4°17'23" N, 101°19'16" E, 350 m, 23. VIII.–9. IX. 2002, leg. Dominik STRÖHLE, ex coll. STRÖHLE in Zoologische Staatssammlungen, München (Munich), Germany. — No paratypes.

Derivatio nominis: The new species is named after its collector Dominik STRÖHLE. The name is a noun in apposition.

Description ♂: Adult (Fig. 1). Length of forewing 15 mm, alar expanse 34 mm, body length 20 mm.

Head: Antenna black, softly clavate, bipectinate with apical tuft of scales. Labial palpus dorsally black, ventrally densely covered with long-tufted yellow scales and a mix of both laterally, exceeding the head only a little. Frons yellowish-white, patagia yellow throughout, more broad dorsally. Proboscis well developed, surely functional.

Thorax: Tegulae, mesothorax and metathorax with little patches of bright yellow scales, long hair-like scales on base of wings. Mid and hind tibia black, tufted with long hair-like yellow scales ventro-laterally and with a blue-metallic sheen; tarsi without specialized scales.

Abdomen: First tergite with a narrow yellow stripe, exceeding laterally but not closing at sternite. All other tergites covered with blue scales. Anal tuft spread with

a mix of yellow and black scales, dorsally almost yellow throughout.

Wings: Forewing very narrow, densely covered with brown blue metallic shining scales and opaque throughout, no transparent areas developed. Discal spot darker, R_4 – R_5 long stalked, R_3 and $R_{4/5}$ arising from the same point. ATA-cell reddish-brown and brighter. Hindwing transparent throughout but with yellow sheen especially in apical area. Cu_1 clearly arising before crossvein. Outer margin consisting of brownish-black scales. Base of hindwing with some black and yellow hairs. Discal spot strongly reduced.

♂ genitalia (Figs. 2–6, Gen.-Präp. [= dissection number] HF Ses-type 8): Valva ovoid, relatively elongated. Ventral half of inner surface basally sparsely covered with strong simple setae marginally, followed by strong multifurcate setae more centrally, becoming more and more dense apically. Dorsal half of inner surface densely covered with a mix of simple and multifurcate setae distally, switching to only strong multifurcate and highly specialized setae basally. All setae pointing to bare central zone of valva. Crista sacculi with a extremely reduced patch of strong simple setae. Gnathos and tegumen short, uncus very long and slender, curved and bilobed, dorsoapically densely covered with simple broad, black and rounded setae, ventroapically a large patch of back-pointing dense hairs. Phallus (formerly called aedoeagus; see KRISTENSEN 2003: 103) rectilinear, reaching two thirds of length of valva, with a sclerotized flat process apically. Saccus rounded, as long as more sclerotized vinculum and strongly angled to it. Anellus almost quadratic with sclerotized and processed corners.

♀ unknown.



Fig. 1: *P. dominiki* sp. n., holotype, ♂; scale in mm.



Figs. 2–6: *P. dominiki* sp. n., ♂ genitalia. Fig. 2: Valva. Fig. 3: Tegumen, uncus and gnathos. Fig. 4: Saccus. Fig. 5: Phallus. Fig. 6: Anellus. — Scale bars: 1 mm.

Diagnosis

By the structure of the antenna, the opaque forewing, the venation of the wing (R_4 – R_5 of forewing long stalked, Cu_1 of hindwing arising before crossvein) and the structure of the ♂ genitalia (valva ovoid, gnathos and tegumen short, uncus very long), *P. dominiki* sp. n. belongs to the tribe Paranthrenini NICULESCU, 1964. The new species seems somewhat similar to some species of *Nokona* MATSUMURA, 1931, but cannot be confused with any related species by external features. From all it differs clearly in certain characters of the ♂ genitalia (dorsal half of valva covered with specialized hand-shaped setae in *Nokona*; ŠPATENKA et al. 1999: 99). From *Taikona matsumurai* ARITA & GORBUNOV, 2001, the only species of *Taikona* ARITA & GORBUNOV, 2001, it differs in the coloration of the forewing (more hyaline in *Taikona*), in the venation of the forewing (veins R_3 and $R_{4/5}$ shortly stalked in *Taikona*) and the conformation of the genitalia (ARITA & GORBUNOV 2001: 165). It also can be easily distinguished from all species of *Scoliokona* KALLIES & ARITA, 1998 by the structure of the phallus (with sclerotized plate or plates in *Scoliokona*), the form of the setae of the valva (hand-shaped and additionally with well separated

row in *Scoliokona*) and in habitus (KALLIES & ARITA 1998: 260). All known species of *Paranthrene* HÜBNER, [1819] differ from *P. dominiki* sp. n. in the relatively elongated shape of valva, in the crista sacculi (with very reduced patch of setae in *P. dominiki* sp. n.), in the shape of uncus (very slender and rounded), the structure of the phallus (sclerotized flat process instead of apical spine) and in external features. From the closely related *Paranthrene aureoviridis* PETERSEN, 2001, the new species differs in the forewing, in the structure of the abdomen and the shape of uncus and saccus (lower ETA hyaline, segments 4 and 5 of abdomen depressed, uncus not rounded and saccus thin in *P. aureoviridis*: PETERSEN 2001: 705). The minimal differences between *P. dominiki* sp. n. and the definition of the genus *Paranthrene* HÜBNER, [1819] (see structure of the phallus) are not sufficient to introduce a new genus in Paranthrenini.

Life history: Unknown.

Distribution: Only known by the holotype from the Cameron Highlands in Malaysia.

Remarks

In spite of intensive attempts attracting sesiid moths by synthetical pheromons the holotype was caught accidentally by walking in virgin forest. Especially in Paranthrenini, tropical species are often recorded in one specimen only.

Acknowledgements

I express my cordial thanks to Dr. Axel KALLIES, Melbourne, Australia, for valuable discussion by email.

References

- ARITA, Y., & GORBUNOV, O. (2001): Sesiidae of Taiwan. I. The tribes Tinthiini, Similipepsini, Paraglosseciini, Pennisetiini, Paranthrenini and Cissuvorini. — *Japanese Journal of Systematic Entomology* 7 (2): 131–188.
- KALLIES, A., & ARITA, Y. (1998): New and little known clearwing moths (Lepidoptera, Sesiidae) from the Philippine islands. — *Transactions of the Lepidopterists' Society of Japan* 49: 245–270.
- KRISTENSEN, N. P. (2003): 4. Skeleton and muscles: adults. — Pp. 39–131 in: KRISTENSEN, N. P. (ed.), *Lepidoptera, moths and butterflies. Vol. 2: morphology, physiology, and development.* — Part 36 in: FISCHER, M. (serial ed.), *Handbook of Zoology, vol. IV, Arthropoda: Insecta.* — XII + 564 pp.; Berlin, New York (W. de Gruyter).
- PETERSEN, M. (2001): Zwei neue Glasflüglerarten aus Nepal. — *Esperiana, Buchreihe zur Entomologie*, 8: 704–708, pl. 30.
- ŠPATENKA, K., GORBUNOV, O., LAŠTŮVKA, Z., TOŠEVSKI, I., & ARITA, Y. (1999): Sesiidae — Clearwing moths. — In: NAUMANN, C. M. (ed.), *Handbook of Palearctic Macrolepidoptera* 1: xv + 569 pp. — Wallingford (Gem Publ.).

Received: 5. VII. 2005